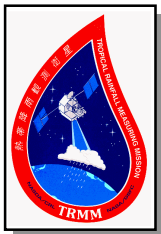


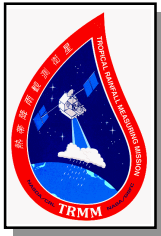
TRMM Monthly Status Briefing

October 6, 1999



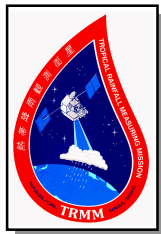
FOT Overview

- Key Issues or Upcoming Events to be discussed
 - Ground System
 - » Event Reports
 - Subsystem Overview
 - » Solar Array jitter status
 - » ESA Calibration
 - Instrument Overview



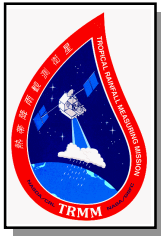
FOT Overview

- Operations Status - Engineering Staff
 - Flight Ops Summary - Lou Kurzmilller
 - Training & Certification Status - Ave Kludze
 - Thermal & Electrical - Ave Kludze
 - RCS - Andy Calloway
 - Deployables - Joe Kowalski
 - ACS, FDS, C&DH, & RF - Ed Weidner
 - Power - Candace Shoemaker
 - LIS & CERES - Candace Shoemaker
 - VIRS - Ave Kludze
 - TMI & PR - Joe Kowalski
 - Ground System - Ed Weidner



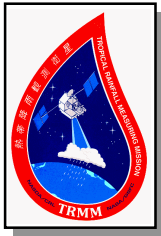
Flight Operations Summary

- Supported 517 SN events in September
 - 2 Yaw Maneuvers & 6 Delta-V Maneuvers
- 11 Event Reports generated
 - ER #125 through #135
 - 4 refer to in-house concerns; 5 to external concerns (WSC/NCC, router); 2 refer to FDF product concerns
 - ER #135: Lost ~1 hour of data per instrument from Q-Chnl degradation following long event gap
 - Ground System will discuss
- Staffing - No new developments



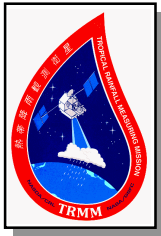
Training

- New hires working towards certification
 - Two have completed all 3 real-time tests
 - Two have completed 2 out of 3 real-time tests
- Playback library index now populated and ready for Advanced Training Phase I
 - Sign-up sheet being designed to ensure compliance



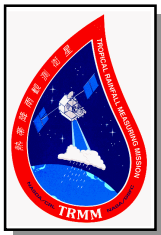
Thermal Subsystem

- Thermal subsystem performed nominally
- Thermal data will be provided monthly to Code 540 for analysis
 - Starting this month
- No new Anomaly Reports or outstanding issues



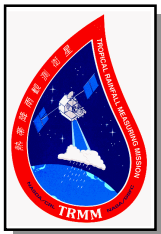
Electrical Subsystem

- Electrical subsystem performed nominally
- No new Anomaly Reports or outstanding issues



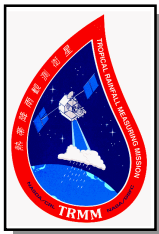
RCS Subsystem

- RCS performed nominally through Delta-V maneuvers #120 - #125
- Fuel remaining is 687.316 kg of hydrazine, with sufficient pressurant to last into 2003 based on latest predictions



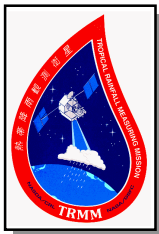
Deployables Subsystem

- Meeting held with Code 540 on 99-263 to discuss support
 - Agreed certain data will be provided to NASA engineers monthly
 - » Data will be transferred by FOT to a FTP server
 - » Already provided solar array drive temperatures



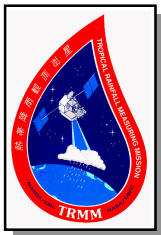
ACS Subsystem

- Delta-V #124 was only the 4th maneuver out of 48 in which TSMs #4/7 tripped (0.51° limit)
- Open Issues
 - ESA investigation
 - » May be the cause of large Yaw updates and solar array jitter
 - » May be linked to radiation source
 - Yaw Updates
 - » Will probably perform DSS calibration but will not eliminate inaccuracy
 - Solar array oscillations
 - » Next high beta angle (-55°) on 99-328
 - » Code Review done; FSW will start testing



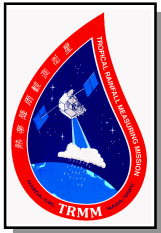
ACS Subsystem

- Open Issues (continued)
 - Failure of -Y solar array
 - » ACE command to reduce torque gain in Safehold
 - » Possibility of uplinking adjusted ACS tables 54 & 66
 - Torque may not build up in an inertially fixed mode
 - » Possibility of pitching spacecraft to warm PR in Safehold/Sun Acq
 - Uplinked ACS System Table #85 (Ephemeris Limits) - CCR #035
 - » Awaiting more successful updates before committing to EEPROM



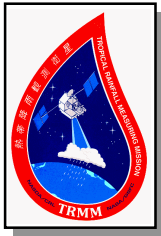
FDS Subsystem

- UTCF adjusted on 99-270
 - Current value is 31535996.858936 sec
- Invalid Stream ID due to VIRS on 99-249 and 253
- Q-starts (10) and Flywheels (3)
- Open Issues
 - Elimination of launch TSMs (CCR #039)



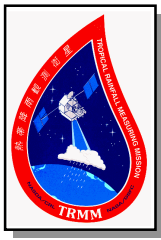
C&DH Subsystem

- No FS Adjustment needed
- EDACs (12)
- PR RT errors on 99-250, 253, and 255
- RT error received from PSIB A on 99-272



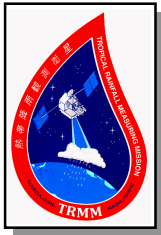
RF Subsystem

- Center frequencies still steady, with XP2 drifting towards uplink
- One generic late acquisition on 99-244



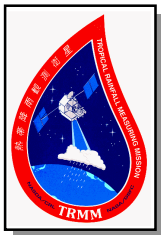
Power Subsystem

- On 99-272 PSIB Normal Packet Time-out (AR #77)
 - Exact cause under investigation
 - Bus error also detected
 - Opened Anomaly report to track frequency
- Open Issues
 - FSW (CCR #050) patch to PSIB timer routines (AR #73)
 - » Procedure to reset PSIB timers is complete
 - Code 563 evaluation of current battery charge operations
 - » Continue with current settings and monitor



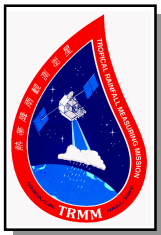
Power Subsystem

- Open Anomalies
 - #55 Battery 2 Cell 1 Hitting YH and RH limits
 - #73 PSIB A Orbit Status Timer Unchanged
 - #77 PSIB Normal Packet Time-out



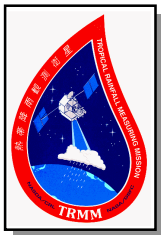
LIS Instrument

- Routine MSFC real-time command request performed on 99-260
- LIS Automatic Heater Controller powered OFF Primary Heater and powered ON Secondary Heater on 99-265 at 18:16:24z (AR #76)
 - Second occurrence (first on 99-237)
 - Nominal Primary Heater configuration restored on 99-265 at 21:18:29z via MSFC command request
 - Caused by single event upset
 - » Heater control algorithm does not detect or correct bit flips



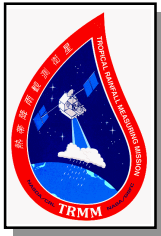
CERES Instrument

- Next turn on period will await TERRA checkout
 - Will most likely not power OFF again due to converter reading saturation
 - Concerns over Y2K plans for Sun Acq/ Instrument Load-shed
- Open issues
 - Awaiting official closure of Anomaly Report #69
 - » CERES DAA High Voltage on +15 V converter
 - Awaiting new TSMs for CERES current monitoring (CCR #045)



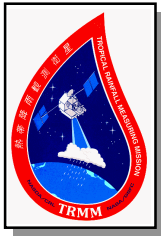
VIRS Instrument

- Two Solar Calibrations were performed on 99-246 and one each on 99-267 and 268
 - 99-246: checking for thermal leaks
 - 99-267 & 268: testing of planning aids
- No new Anomaly Reports
- Outstanding issues:
 - On-going investigations into why planning aids are inaccurate
 - » FDF support would be required to resolve the problem
 - Jonathan Glickman to talk to management for work approval
 - No problems expected
 - » GSOC transformation matrix adjustment is one possible fix



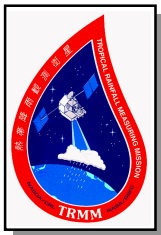
TMI Instrument

- No open issues or concerns



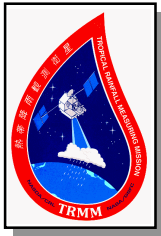
PR Instrument

- Performed NASDA requested PR External calibrations on 99-270 & 99-271
- Open issues
 - Will PR interfere with SRTM (Shuttle Radar Topography Mission)?
 - » Provided FDF with PR frequency



Ground System

- FORMATS installed on string 2 on 99-272
- ODB 11.2 built on string 2
- Event Reports
 - 125: Bad Daily EPV file from FDF
 - » Delta-V maneuver incorrectly modeled
 - 126: Two TDRS Spare events taken
 - » TDE event scheduled to replace them
 - 127: DS Released before Rexmit on VR4
 - » Pacor had all data
 - 128: DS Rexmit interruption of release
 - 129: Day 259 EPV continuity failure
 - » Had to widen the limits for position acceptance
 - 130: String 3 TR3WS2 auto-rebooting



Ground System

- Event Reports (continued)
 - 131: Low rate switching problem at WSC
 - 132: WS2 on string 1 locked up
 - 133: Could not build GCMR on string 2
 - » Coherency switch lost
 - 134: ETO on TDW
 - » Had to reschedule 2 events to TD171